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THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME XVII
NUMBER 7

SEPTEMBER, 1909

WHOLE
NUMBER 167

MAKING A HIGH-SCHOOL PROGRAMME

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The importance of a good school programme cannot be overestimated. It is to the school what the timetable is to the railroad, and upon it largely depends not alone the economical management of the institution, but its educational efficiency as well.

With the growth of the high-school curriculum has of necessity come increased complexity in the school programme. As long as all pupils took the same studies the programme was comparatively simple, but as the number of studies multiplied it became impossible for any pupil to take them all, and a choice of a part of them became a necessity. At first certain courses, such as the commercial course, the classical course, etc., were arranged, and a pupil selecting one or the other of these courses was expected to follow it without deviation to the end. This resulted in the division of the school into a number of groups, but the members of each group pursued exactly the same studies. This change produced some change in the school programme, but it was still comparatively simple.

It was found that the fixed courses of study did not adequately meet the varied needs of the pupils, needs which developed hand in hand with changes in our social and industrial life. Fixed courses of study also made it almost impossible for a pupil to change from one course to another without beginning

over again. The pupil, for instance, who had discovered himself after entering the high school and desired to change his work could not readily do so.

The next step in advance was to offer certain elective studies within the course. The pupil still chose a given course of study, but in the later years of the course was offered a choice of work from other courses of study. A recent examination of courses of study in many high schools seems to show that most of the high schools of this country are now at this stage of development, i. e., they offer a number of courses of study with restricted election in the latter years of the course.

In 1901 the city of Boston (one of whose high schools is used for illustrative purposes in this paper) went one step farther, threw down all the barriers offered by courses of study, and, with the exception of a few studies which were required of all pupils, put all the rest into one elective group and offered free election to all pupils.

The accompanying elective sheet shows how great freedom of choice is now allowed in this city.

It will be noticed that English, physical training or military drill, choral practice, and hygiene are required subjects, but all others are elective. Certain studies cannot be elected until certain years, and there are certain broad requirements for a diploma, designed to prevent unwise choice of work by pupils. Otherwise pupils are free to choose as they please. The pupil desiring a commercial course chooses from the list commercial subjects, and the pupil fitting for college or technical school chooses the studies that he needs. Should a pupil develop new ambitions, he is at liberty at once to choose his work accordingly.

This change was a most radical one, and there were found and still can be found teachers who believe that it was a great mistake; that pupils entering the high school are too young to choose for themselves; that they choose unwisely and follow as a rule "lines of least resistance," and that fixed courses of study or courses with limited election yielded better results. I have never seen statistical information which confirmed these opinions. It would be a fruitful field for investigation to gather

ELECTION OF STUDIES—ROXBURY HIGH SCHOOL

NAME.....(NEXT YEAR'S) CLASS ROOM.....COURSE.....

PRESCRIBED STUDIES					ELECTIVE STUDIES				
Year—First Elective	Length of Course in Years	Study	Year of Study	Points	Year—First Elective	Length of Course in Years	Study	Year of Study	Points
I	4	English			I	4	History.....		
					3	1	Civil Government ..		
I	4	Physical Training (girls).....			I	4	Latin.....		
I	4	Military Drill (boys)			I	4	French.....		
					I	4	German.....		
I	4	Choral Practice.....			2	3	Greek.....		
I	3	Hygiene.....			I	2	Algebra.....		
					2	3	Geometry.....		
					I	1	Botany.....		
					2	1	Zoölogy.....		
					3	1	Physiology.....		
					2	2	Physics.....		
					3	2	Chemistry.....		
					I	2	Book-keeping		
					2	3	{ Phonography }		
							{ Typewriting }		
					2	1	Commercial Geog- raphy.....		
					3	1	Mercantile Law		
					3	1	Economics.....		
					I	4	Drawing.....		
					3	2	Music.....		
					3	1	Household Science and Arts.....		
		Total Points.....					Total Points.....		

GENERAL DIRECTIONS

A. Every pupil's election of work for the first three years of his course, unless special exception has been made by the headmaster, must include all the prescribed studies, and a sufficient number of elective studies to amount, all told, to not less than nineteen, nor more than twenty-two points each year. In the fourth year all the pupil's work is elective to a total of not less than seventy-six points for the four years.

B. A diploma is awarded to pupils who have won seventy-six points, which must include: (1) six points in physical training or military drill, (2) one point in hygiene, (3) three points in choral practice, (4) at least thirteen points in English, (5) at least seven points in some foreign language or in phonography and typewriting, (6) at least four points in mathematics or book-keeping, (7) at least three points in history, (8) at least three points in science.

I approve of my child's selection of the above studies for the school year 19... to 19...

Parent's Signature

statistics of this kind from schools of varying degrees of freedom in election. We are all of us prone to resist innovations, and to value unduly practices with which we have long been familiar. Because of these mental attitudes, abuses in a new order of things loom large, so large as often to hide advantages. Personally I have witnessed a steady growth in judgment by pupils in the choice of their work, and such abuses as I have seen have been largely due either to transition from the old to the new, or to faults of administration, a failure properly to inform and direct pupils in their choice of work.

The introduction of electives at once very greatly increased the difficulty of making the school programme. Pupils must no longer be provided for in groups, but as individuals, and there were almost as many differences in elections as there were pupils.

The making of school programmes has never received in educational discussions the attention which it merits, probably because of its very great complexity. In every high school there are a host of considerations purely of a local nature that enter into the making of its programme. The requirements of the course of study, the personal characteristics of the teacher, and his preparation to teach, the size, situation, and number of available schoolrooms, the coming and going of special teachers, etc., etc., are all considerations which enter into the making of the school programme, and yet are not alike in any two high schools. There are, however, certain fundamental considerations that underlie all programme making, which can be set forth and which are valuable. It is proposed in this paper to bring out some of these considerations by treating in detail the making of the programme of a particular school, but the principles involved have been successfully applied in a variety of other high schools, in small as well as large schools, in schools with restricted, and schools with unlimited elections.

THE PROBLEM

The Roxbury High School, Roxbury District, Boston, is a mixed school of about 850 pupils, 400 of them in the entering class. The girls outnumber the boys about three to one. There

is unrestricted election of studies. Pupils can and do reach back and take first-, second-, or third-year studies in every subsequent year. Some studies have recitations but once a week, others two, three, four, and five times per week. Two hours in the week are devoted to military drill by all the boys; one hour to choral practice by the pupils of the entering class, another hour by pupils of the three upper classes. During one hour, known as the "office hour," the entire school is free. Science subjects and drawing require one or more double periods for laboratory work. The programme presents unusual difficulties, as much so perhaps as will be found in any mixed high school anywhere. The problem is to so arrange the programme of studies as to allow every pupil to choose what he wishes.

NUMBER OF RECITATION PERIODS PER DAY

One of the first things to be determined in any school programme is the number of recitations per day. The length of the school session in most high schools is five hours. Out of this must be taken about 30 minutes for the noon recess, and at least 10 minutes for opening exercises. This leaves 280 minutes per day for recitations. How shall this time be divided? It is usually divided either into six periods of from 40 to 45 minutes each, or into five of 50 or more minutes each. School regulations usually require that every pupil shall carry work which employs on the average about twenty periods per week, and the "office hour" employs one more. With five recitation periods per day, twenty-one periods per week will then be employed out of a total of twenty-five. This does not allow a sufficient margin of unemployed time to avoid conflict in the pupil's programme. Especially is this so if for any reason the pupil is obliged to carry extra work, or needs extra periods for laboratory or shop work. Six periods per day, thirty per week, is the more common division of time, and it allows a sufficient number of unemployed periods to give necessary flexibility in the pupil's programme. In the Roxbury High School the school session is extended fifteen minutes so that each recitation period may be exactly 45 minutes long.

RECITATION GROUPS

How shall these periods be utilized for recitations? This is a very important consideration. One of two plans is usually followed: Recitations are either scheduled any time in the week that will avoid conflict, and the programme thus forms what has been aptly called a "mosaic," or the periods of the week are divided into a number of non-conflicting recitation groups, or "blocks" as they are sometimes called.

It is possible where there is restricted election, and pupils' schedules are therefore very much alike, to arrange a programme on the "mosaic" plan without many conflicts, but it will generally be found rigid and inflexible if a pupil chooses a course out of the ordinary, and many a pupil's worthy ambition has been "nipped in the bud" by the inexorable demands of such a programme.

Moreover, such a programme does not possess the quality of permanence. It is so delicately put together that the changes in classes, which of necessity come from year to year, so derange the "mosaic" as to call for a new programme each year, in the making of which the old programme is of very little help.

If, however, the recitation periods of the week are divided into a number of different groups, which are of necessity non-conflicting because they represent different periods of time, recitations may be assigned to different groups with no possibility of conflict; changes from year to year may be provided for by minor changes in the group distribution, and such grouping may be improved upon and perfected as time goes on so as to be well-nigh permanent.

The number of periods in a recitation group will vary according to the requirements of the "Course of Study." In the Roxbury High School the thirty recitation periods of the week are divided into six groups of four periods each, and a seventh group of six periods. Four periods constitute a recitation group because more subjects have four recitations per week than any other number. To the six recitation groups are assigned all or nearly all recitations. The seventh group is used for irregular recita-

tions requiring often special teachers, such as military drill or choral practice, for the "office hour," and for laboratory work or extra recitations. If a subject requires four or less recitations per week it is assigned to one of the six groups. If it requires five recitations per week, or double periods for laboratory work, these are provided for by combining the group with some period in the seventh group.

How shall these six recitation groups be chosen? This is by no means a simple problem. The natural choice would be to have four of the first recitation periods of each day constitute the first group, four of the second the second group, etc., but such a choice means that to some subjects will be assigned all of the first periods of the day, and to others all of the last periods.

It is a well-established fact in pedagogy that there is a great difference in the working efficiency of a pupil in the first and last hours of the day, and that subjects assigned to the last hours are at a distinct disadvantage when compared with those assigned to the early hours. Especially is this noticeable if they happen to be different divisions of the same subject. The selection of the seventh group is largely determined by the peculiarities of the group itself, the coming and going of special teachers, etc. It should therefore be the first chosen, and around it should be arranged the other six groups in such a way as to provide for an equal distribution of early and late periods, and for combination with the seventh group for extra recitations and double laboratory periods. The accompanying blank shows how these groups have been arranged in the Roxbury High School. Other schools would require a different grouping, but the principles involved would apply to all schools.

The number in the lower right-hand corner of each space indicates the group to which the period has been assigned. The periods themselves are designated as first, second, third, etc., period of the day. Group 1 includes the 5th period Monday, the 5th Tuesday, the 2nd Wednesday, and the 1st Friday. Group 2: Tuesday 4, Wednesday 3, Thursday 5, Friday 2; Group 3: Monday 4, Tuesday 2, Wednesday 5, Thursday 3; Group 4: Monday 3, Wednesday 4, Thursday 4, Friday 3; Group 5: Monday 2,

Tuesday 1, Wednesday 6, Friday 5; Group 6: Monday 1, Tuesday 6, Thursday 1 or 2, Friday 6. If you add up the hours of the day for each group you will find that five of them give a total of 14 and one of 13, thus showing a nearly even division of early and late hours of the day.

DAILY PROGRAMME OF..... 190.. to 190..
CLASS..... ROOM.....

	9:15-10:00	10:00-10:45	10:45-11:30	11:30-12:15	12.45-1:30	1:30-2:15
Mon.	6	5	4	3	1	7
Tues.	5	3	7	2	1	6
Wed.	Office 7	1	2	4	3	5
Thurs.	7 or 6	6 or 7	3	4	2	7
Fri.	1	2	4	7	5	6

The seventh group includes, Monday 6, Tuesday 3, Wednesday 1, Thursday 1, or 2 and 6, and Friday 4. Monday 6 and Thursday 6 are drill hours; Wednesday 1 the office hour; Thursday 1 the hour for choral practice by the entering class, and Thursday 2 by the three upper classes. Extra recitations are provided for by combining Group 1 with Thursday 1, 2 or 6 of Group 7; Group 2 with Monday 6; Group 3 with Friday 4; Group 4 with Tuesday 3; Group 5 with Thursday 1, 2 or 6; and Group 6 with Wednesday 1. Double laboratory periods are provided for by combining Group 1 with Monday 6 of Group 7; Group 2 with Tuesday 3 or Thursday 6; Group 3 with Tuesday 3; Group 4 with Friday 4; Group 5 with Friday 4, and Group 6 with Thursday 1 or 2. Some of these combinations can be made by girls only, but as our girls outnumber the boys three to one, some divisions are made up wholly of girls. Other combinations

between the six groups are possible and are used in the entering class where the number of classes reciting five times per week is large.

ELECTION OF STUDIES BY PUPILS

The success of the elective system depends upon the wise and careful direction of pupils in their choice of work. Time should be allowed for the teacher to advise with the pupil and fully inform him about the different subjects offered, and parents should be invited to consult with teachers in the matter. Obviously this cannot be done if election is deferred until the beginning of the school year, when there are so many other things to be attended to. Pupils in the three upper classes should elect their work for the ensuing school year not later than June 1.

I know of no reason why, if elections are made in May, both the school programme and the pupils' individual programmes cannot be made out in the summer vacation, and the pupil be given his assignment of classes on the opening day of school so that he may be ready for work the second day. Because they come from many different grammar schools, the entering class had better defer their elections until they enter the high school in September, when they will receive uniform instructions and supervision by high-school teachers. This need not, however, interfere with the making of the school programme during the summer vacation. The size of the entering class is approximately known in June, and by means of data from previous entering classes the number of divisions in each subject may be estimated fairly well. It will be found that the percentage of pupils in entering classes electing each subject varies very little from year to year.

The elective blank used in the Roxbury High School, and given above (see p. 451) has been in successful use for two years. It designates prescribed and elective studies, indicates in the two columns to the left the year when subjects may first be elected and the number of years they may be pursued, and leaves two blank columns to the right, one for the indication of the year of the subject desired and the other for the number of points that it

counts. Under the head of "General Directions" are found the requirements of the course of study as laid down by the school authorities, and at the bottom of the page is a place for the parent's approval of his child's selection of work. The parent's approval should always be obtained. He is the most interested party, and his signature acts to prevent whimsical and unreasonable changes in elections by the pupil in the fall of the year.

TABULATION OF ELECTIVES

The pupil's elective sheets should next be carefully tabulated to ascertain the number electing each subject, and from these tabulations can be computed the number of recitation divisions for the ensuing year. If for no other purpose than for this tabulation, a printed elective blank is desirable. Without it the pupil's electives are in his own hand writing and in no definite order. With it the electives are printed and appear each at a definite place on the blank where they can instantly be recognized in the tabulations and re-tabulations that are necessary before the programme is completed.

DISTRIBUTION OF DIVISIONS AMONG RECITATION GROUPS

After the number of divisions has been determined they must be distributed among the different recitation groups so as to avoid conflict. Upon the skill with which this is done, more than upon any other one element, depends the success of the programme. Care must be taken to avoid conflicts both on the part of the teacher, by not placing in the same group two divisions taught by the same teacher, and on the part of the pupil, by not placing in the same group two divisions desired by the same pupil.

Two directions of general application may be given with reference to this distribution:

First, Avoid as far as possible placing in the same group subjects with but one division, unless the subjects themselves are non-conflicting. Different years of the same subject, e. g., Latin I and II or Algebra I and II, are of themselves non-conflicting and may appear in the same group. Our course of study does not allow pupils in the entering class to elect more than one

foreign language. This makes foreign languages of the same year, e. g., Latin I and French I, or German II and French II, non-conflicting. Some studies are non-conflicting by nature, e. g., the higher courses in Latin or Greek, and the higher courses in commercial branches are rarely chosen by the same pupil and may be placed with little probability of conflict in the same recitation group. Other requirements of the course of study might be cited which would tend to make other studies non-conflicting.

Second, When there is more than one division of a subject give the different divisions the widest possible distribution, i. e., if the number of divisions be less than the number of groups, do not allow two divisions to come in the same recitation group; if the number be more than the number of groups, but not more than twice as many, do not allow over two divisions to come in a group, etc. Such a distribution gives very great flexibility for the assignment of work both to teacher and to pupil. It may be desirable before the grouping is finally settled to consult the elective sheets of pupils in the highest class, because in the last year of the course there are so many subjects with single divisions, but this will hardly be necessary for the three lower classes.

ALPHABETICAL DESIGNATION OF DIVISIONS

After all of the divisions have been distributed among the recitation groups there should be some comprehensive designation of divisions. The method of designation described below is one of the distinctive features of this school programme. It is so simple that it can readily be understood by pupil and teacher, and it can be used equally well by schools with restricted or schools with free election.

All studies are classified as first-, second-, or third-year studies, according to the year when they can first be elected. Each class in the school is divided into equal alphabetically arranged sections. In the three upper classes about 35 pupils, and in the entering class 25 pupils are assigned to a section. These sections are designated by the letters of the alphabet, section "a"

being the alphabetically first 35 or 25 pupils, section "b" the alphabetically second, etc. Thus, in the Roxbury High School for the present year, Class IV is divided into two such sections called "a" and "b," Class III into five sections designated by the letters "a" to "e," Class II into six sections designated by letters "a" to "f," and Class I into twelve sections designated by letters "a" to "l." Class II may be selected for illustrative purposes. It consists of 205 pupils, and is divided into six sections, five with 34 pupils each, and one with 35, designated as Sections *a*, *b*, *c*, *d*, *e*, and *f*. Since English is required of all pupils in Class II, each of these alphabetical sections constitutes a recitation division in English, known as English II *a*, English II *b*, etc. Of the 205 pupils in Class II a little over one hundred elected French II. This is about one pupil out of two, and it would therefore take two of the equal alphabetical sections to yield a sufficient number of pupils to form one recitation division in French II, and such a division is accordingly designated by two letters of the alphabet, "French II *af*," "*cd*," or "*be*," the letters indicating the source of its pupils. Again, only a third of the pupils elected Latin II, and therefore three alphabetical sections would be necessary to yield sufficient pupils to form a Latin II division, which is called "Latin II *abc*" or "*def*." In like manner every division is designated by one or more letters of the alphabet, the subjects with the fewer divisions having the larger number of letters, and the letters in every case indicating the alphabetical sections from which the pupils came. It there is but one division in a subject no letters at all are used.

Three very important things may be accomplished by this method of designating divisions:

First, It tends to make divisions of the same kind equal in size. Since the basis of this method is the equal alphabetical section, and since each recitation division of a given kind draws its pupils from as nearly as possible the same number of sections, it follows that the divisions themselves should be about equal in size.

Second, It directs the pupil in his choice of divisions and enables him, if necessary, to make out his own programme. A

pupil in alphabetical section "a" chooses only recitation divisions designated by "a," pupils in section "b" only those designated by "b," etc.

Third, These letters may be used to avoid conflict within recitation groups. Since each letter represents an entirely different section of pupils it follows that there can be no conflict within a recitation group unless letters are repeated. Such repetition is therefore avoided as far as possible in designating studies of the same year within a group. An illustration will make this clear. The following divisions of first-year subjects occur in one recitation group: English I *g*; English I *h*; physical training I *def*; history I *ab*; French I *bc*; German I *abc*; algebra I *jk*; book-keeping I *i*; book-keeping I *j*. The letters have been chosen so as to avoid repetition as far as possible. It will be noticed that the letter "a" is repeated in history I and German I. The pupils then of alphabetical section "a" who happen to take these two subjects would have a conflict. They would retain German I, because there are fewest divisions of this study, and seek another history I division. The method of widest distribution has placed one or more history I divisions in every recitation group, and no difficulty will be found in finding one. Letters "b" and "c" are repeated in French I and German I, but there is no conflict here because pupils cannot elect both of these languages in their entering year. The letter "j" is repeated in algebra I and book-keeping I, but there is slight chance of conflict here because pupils rarely elect these two subjects in the same year. No other letters of the twelve alphabetical sections into which the entering class is divided are repeated, and there is therefore no other possibility of conflict. This principle of avoiding conflicts by avoiding as far as possible the repetition of letters within a group has been carried throughout the entire programme. It is of very great importance in the lowest classes, but of decreasing importance as you go upward, for two reasons: First, because of the increasing number of studies in the higher classes, with but one division; and, second, because of the increasing number of pupils who reach back and elect studies of previous years.

There are then two distinct methods of avoiding conflict

in this programme, one by having six non-conflicting recitation groups, which may be called a horizontal variable, and the other by avoiding alphabetical repetition within the group, which may be called a vertical variable. Given these two variables there are many different ways in which every pupil's programme may be arranged. If one arrangement causes a conflict another can easily be found which avoids it.

In the entering class 25 instead of 35 is taken as the number in an alphabetical section, for two reasons: First, because it is desirable that recitation divisions in this class be smaller than those in the three upper classes; and second, because it is always difficult accurately to forecast in June the number of pupils who will enter in September. It very often happens that a programme carefully made out during the summer fails to work in September because of an unexpectedly large entering class, and consequent extra recitation divisions. If 25 is taken as a basis, each division can increase to 35 without serious harm, the more so because in this class it is likely to decrease to 30 or less before January 1. An increase from 25 to 35 means an allowance for an increase of 40 per cent. in the entering class. Even this large increase could be accommodated without the formation of a new division, because the extra pupils would evenly distribute themselves among the various alphabetical divisions already established. As an example in hand, the programme for the Roxbury High School was made out last summer on the basis of 300 pupils in the entering class, but nearly 400 entered. These pupils were accommodated without the formation of an extra division.

PUPILS' INDIVIDUAL PROGRAMMES

It has already been stated that for the three upper classes time and confusion at the beginning of the school year would be saved if each pupil's individual programme could be made out during the summer and given to him when he entered in the fall. Under many conditions this would be a tremendous and well-nigh impossible task to accomplish. With a programme made upon the plan of this one, however, it can be done by the expenditure on

the average of not over a minute to a programme, and it is well worth this expenditure of time. Two illustrations will make my meaning clear.

Etta A. Gore, Class III, elects:

	Groups	Changed Groups
English III.....	3	6
Physical training II.....	1	4
Choral practice.....	7	..
French I.....	5	3
German III.....	5	..
Household arts and science I	1	..

This is a difficult programme to arrange, because the pupil has reached back and chosen two studies, and in other ways her selection of work is peculiar.

Every teacher is provided with duplicated sheets showing the group, recitation periods, and room for every division, and the alphabetical sections for each class. Reference to these sheets shows that this pupil belongs in alphabetical section "b." All of her recitation divisions then must be designated by the letter "b," and against each of her electives is placed the group number of the "b" division of the same, as indicated above. It will be seen that two of her recitations, French I and German III, come in the same recitation group, 5, and therefore conflict. German III is retained because there is but one division in this subject, and another French I division is sought. To arrange it, the group assignments of two other electives must be changed as indicated above. As finally arranged her group numbers read 6, 4, 7, 3, 5, 1. This programme is now ready to be made out on one of the blanks, as given above, by the pupil himself, or, better still, by the teacher to be handed to the pupil when he enters school.

In the next example, the alphabetical section is found to be "e," and the group numbers of the "e" divisions in the different electives to be as indicated. Two numbers, 7 and 2, are repeated. There is no conflict in group 7 because Military Drill and Choral Practice do not come at the same time. There is a conflict in group 2, but another Hygiene division is found in group 6. His group numbers as finally arranged read 5, 7, 7, 6,

4, 1, 2. There is no repetition of group numbers other than 7, and therefore no conflict possible. As soon as one is familiar with group distributions, the placing of these group numbers against each elective and the necessary changes in the same can be done very rapidly.

Harold Mitchell, Class II, elects:

	Groups	Changed Groups
English II.....	5	..
Military drill.....	7	..
Choral practice.....	7	..
Hygiene.....	2	6
French II.....	4	..
Book-keeping II.....	1	..
Phonography I.....	2	..

With the entering class this cannot be done until the opening day of school, but there are always many divisions of every first-year subject, and conflicts are very easily avoided. It is possible on the opening day for pupils of this class to choose their studies and make out their own programmes, and on the second day to bring their parents' approval of their choice and be ready for work.

Before leaving this subject it should be stated that the fundamental assumption of this programme is that all divisions in a given subject should be taught alike. It ignores, for example, such a thing as a college division in algebra, and another division in the same subject for pupils who are not going to college, or special classes in English for commercial pupils, and other classes for other pupils. It assumes that algebra or English, if taught at all, should be taught equally well to all pupils. How often you see in high schools small college preparatory divisions to which are assigned the best teachers and the largest number of recitations, and which can be carried only at the cost of larger classes and poorer teaching in other divisions of the same subject. Such a distribution of the teaching force is not only not economical from a financial standpoint, but it is unjust to a large number of pupils, and it tends to create undesirable class dis-

tinctions in the school. More than that, the formation of special classes of this kind greatly decreases the flexibility of the programme, and increases the difficulty of programme making. The natural, the economical, and the equable way to meet special demands of this kind is to fit the pupil as far as possible in the regular class, and to assign extra periods for whatever extra work may be necessary.

EQUALIZATION OF DIVISIONS

It has already been stated that the plan of this programme tends to keep equal in size recitation divisions of the same kind. Some exceptions to this will be found, however, for two reasons: First, because, in adjusting conflicts, divisions sometimes gain or lose unequally, and second, because it is not always possible to assign the same number of letters to each division.

In Class II, referred to above, there were enough pupils elected phonography I to form four divisions. There are but six alphabetical sections in Class II, and four is not an equal divisor of six. For this reason, two of the divisions in phonography I were designated by two letters each, and two by one letter each. The two-letter divisions would be larger than the one, and would have to be equalized.

To accomplish this equalization, after the pupils' programmes have been indicated, they should be tabulated once more by divisions. This is not a difficult task, and, once accomplished, the size of every division in the three upper classes is known, and equalization can be made merely by changing group numbers on the pupil's elective sheet.

CONCLUSIONS

The present programme has been in use in the Roxbury High School for two years. With no restrictions upon elections, other than the general ones already spoken of, the programme allowed this year 99 per cent. of the electives of Class IV (the highest class), 99.5 per cent. of Class III, 100 per cent. of Class II, and 100 per cent. of Class I, and 99.7 per cent. of the electives of the entire school. Almost as good a showing was made the year before.

During the first year of its trial it also provided instruction for an increased number of pupils with one less teacher than was employed the year before. Both years the school began its regular programme the second day of the school year instead of the second or third week, a saving of time which, if applied to the entire teaching force, would be nearly equivalent to a year's teaching by one teacher.

A summary of the fundamental elements in the making of a good school programme should include:

First, The division of the school week into such a number of recitation periods that the pupil with an average programme shall have a sufficient number of unemployed periods to avoid conflicts in his choice of work. Thirty periods is better than twenty-five for this purpose.

Second, The division of these recitation periods into a certain number of non-conflicting recitation groups.

Third, The arrangement of these groups so as to equally distribute early and late periods of the day, and to provide for necessary extra or double laboratory periods.

Fourth, The election of studies for the ensuing year by pupils of the three upper classes not later than June 1.

Fifth, The tabulation of the pupils' electives, and the estimation of the number of recitation divisions.

Sixth, The distribution of these recitation divisions among the recitation groups in such a way as to avoid conflict on the part of both the teacher and the pupil.

Seventh, The designation of these recitation divisions in such a way as to guide the pupil in his choice of divisions, to insure equality in the size of divisions of like kind, and to avoid conflict within the recitation group.

Eighth, The indication of the individual programmes of all pupils in the three upper classes before they enter school in the fall.

Ninth, A tabulation of pupils' electives by divisions, and an equalization of divisions of like kind.

Tenth, The preparation, in duplicate, for use by teachers, of such copies of the programme as may be necessary to direct new pupils in their choice of work.